

DIS to host annual agent-based modeling course

Argonne's Decision and Information Sciences Division will host its seventh annual course on agent-based modeling the week of May 12. The course is an intensive introduction to agent-based modeling and simulation (ABMS) that presents the foundational ideas of ABMS, advanced ABMS methodologies and some of the latest research in the field.

The course consists of two parts. The first half of the course focuses on ABMS concepts, whereas the second half focuses on ABMS implementation and includes extensive hands-on exercises. Participants are invited to attend the first session, the second session, or both depending on their interests.

The first part will run from Monday, May 12, through the morning of Wednesday, May 14; the second part will run from the afternoon of Wednesday, May 14, through Friday, May 16. The course will be held in Building 900. Argonne employees are welcome to attend, but advanced reservations are required. Contact Michael North (DIS) at ext. 2-6234 for details.

An intensive series of lectures and hands-on laboratories will include topics such as the definition of agents, the design and construction of agents, the design and construction of agent environments, understanding ABMS results, effective presentation of ABMS results, and applications of these topics to specific examples. The latest research results in many of the topical areas also will be discussed.

Researchers focused on scientific and engineering modeling, managers involved in strategic planning or operations, analysts who design and operate models, and software developers who build models will all benefit from this course.

The course provides researchers focused on scientific modeling with a solid understanding of how ABMS can be used for scientific or engineering studies. Researchers should attend both sessions of the course.

The course introduces managers to ABMS, shows them how ABMS can be useful to their businesses, and describes how they can present ABMS results to senior decision makers. Managers should attend the first session of the course.

The course gives analysts the principles of ABMS design, discusses the fundamental features of the leading ABMS development tools and how these features affect ABMS design, and teaches them how to present ABMS results to decision makers. Analysts should attend both sessions of the course.

The course gives software developers the basic principles of ABMS design and shows how to effectively use the leading ABMS development tools. Software developers should attend both sessions of the course.

There are no prerequisites for the first session. Prerequisites for the second session are a good knowledge of general ABMS concepts and a basic familiarity with programming in any high-level language or spreadsheet system.